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## Cancer, Carcinogens and Screening in the Kidney

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Additional information is available at the end of the chapter

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### Abstract

This chapter examines a number of different aspects of renal cancer. Firstly, an introduction into the numerous forms of renal cancers is provided, focusing on renal cell carcinomas their causes and the different treatment options currently available. This chapter also takes a look at renal cancer from a toxicological point of view. Due to the crucial role of the kidneys in blood filtration, this allows them to become susceptible to the exposure and accumulation of potentially carcinogenic chemicals. For this reason, renal carcinogens are looked at in detail focusing on the varying mechanisms of genotoxic renal carcinogens such as aristolochic acid and potassium bromate, and their non-genotoxic renal carcinogens counterparts including ochratoxin A and chlorothalonil. This chapter also examines the different methods currently used to detect a compound's carcinogenic potential, including the *in vitro* Ames test and animal based carcinogenicity screening methods.

**Keywords:** cancer, renal cancer, renal carcinogens, carcinogen screening, genotoxic/non-genotoxic carcinogens